Project Development Phase
Model Performance Test

Date	19 oct 2023
Team ID	B59ACB2EE24AC56B74C4C89695327FAA
Project Name	Students performance analysis
Maximum Marks	10 Marks

Model Performance Testing:

Project team shall fill the following information in model performance testing template.

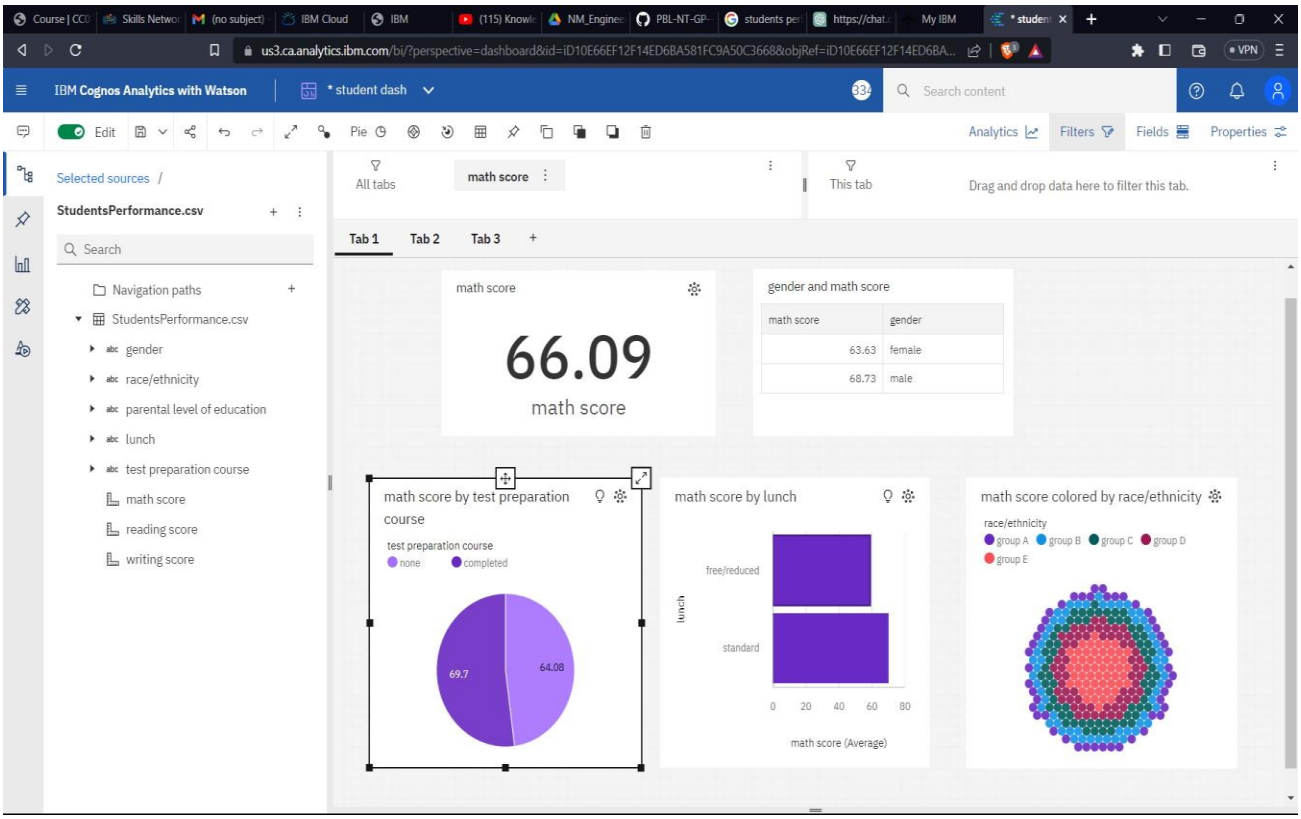
Dashboard design…

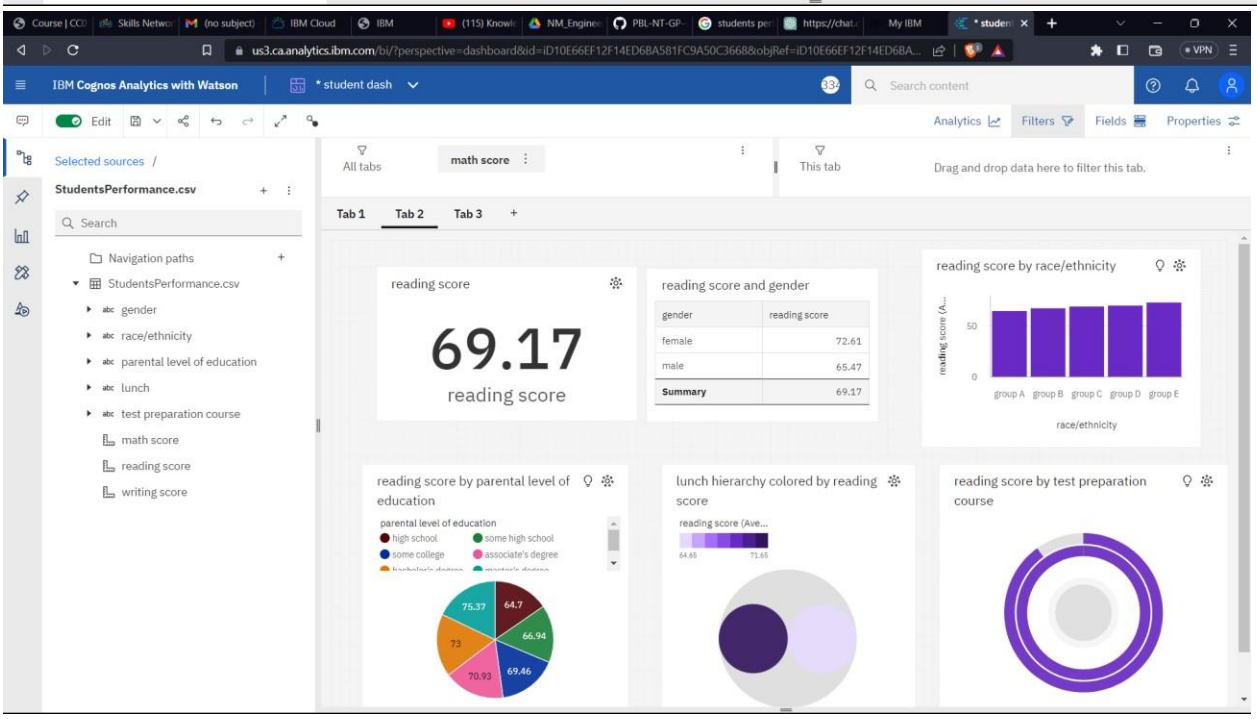
The goal of dashboard design is to present complex information in a clear, concise, and visually appealing way, enabling users to quickly understand and interpret the data.

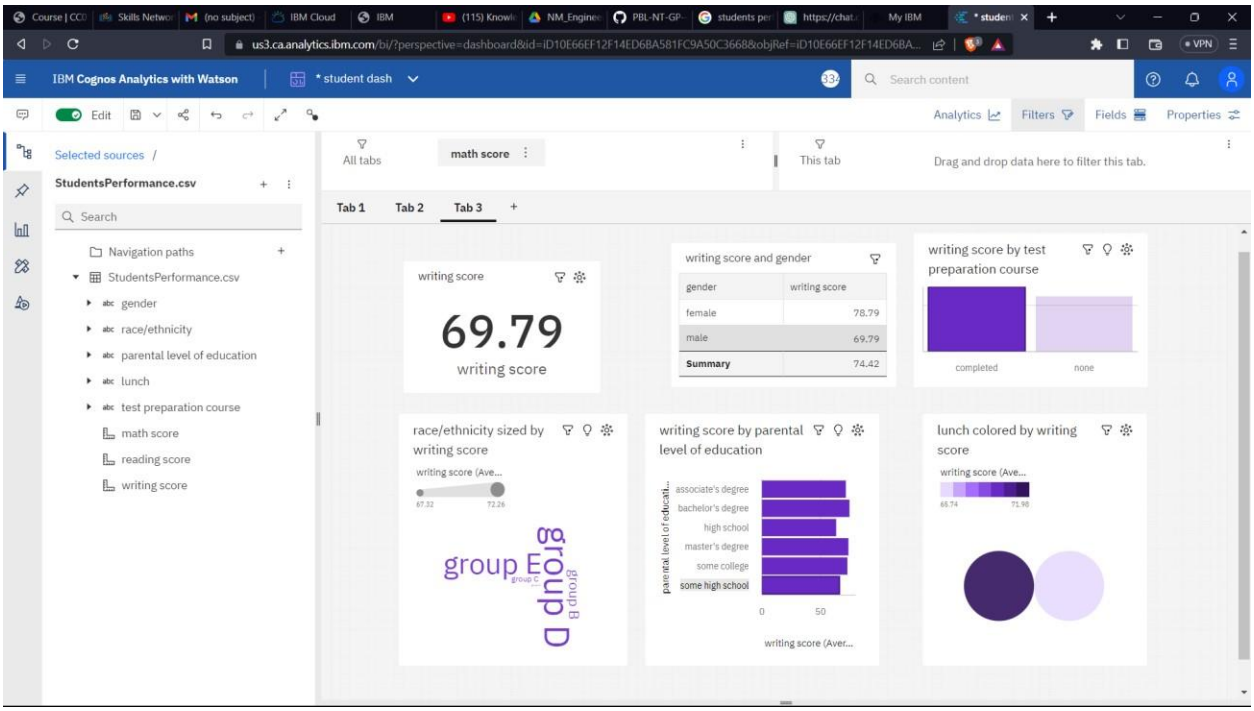
No of visualizations - 3

Here I have created 3 dash boards

1. For reading score
2. For writing score
3. For Math score


IBM Cognos Analytics with Watson
* student dash
Search content
Edit
Pie
Analytics
Filters
Fields
Properties
Selected sources /
StudentsPerformance.csv
Search
Navigation paths
StudentsPerformance.csv
gender
race/ethnicity
parental level of education
lunch
test preparation course
math score
reading score
writing score
All tabs
math score
This tab
Drag and drop data here to filter this tab.
Tab 1
Tab 2
Tab 3
math score
66.09
math score
gender and math score
math score
gender
63.63
female
68.73
male
math score by test preparation course
test preparation course
none
completed
69.7
64.08
math score by lunch
free/reduced
standard
lunch
0
20
40
60
80
math score (Average)
math score colored by race/ethnicity
race/ethnicity
group A
group B
group C
group D
group E


IBM Cognos Analytics with Watson
* student dash
Search content
Edit
Analytics
Filters
Fields
Properties
Selected sources /
StudentsPerformance.csv
Search
Navigation paths
StudentsPerformance.csv
gender
race/ethnicity
parental level of education
lunch
test preparation course
math score
reading score
writing score
All tabs
math score
This tab
Drag and drop data here to filter this tab.
Tab 1
Tab 2
Tab 3
reading score
69.17
reading score
reading score and gender
gender
reading score
female
72.61
male
65.47
Summary
69.17
reading score by race/ethnicity
group A
group B
group C
group D
group E
race/ethnicity
reading score by parental level of education
parental level of education
high school
some high school
some college
associate's degree
75.37
64.7
73
66.94
70.93
69.46
lunch hierarchy colored by reading score
reading score by test preparation course

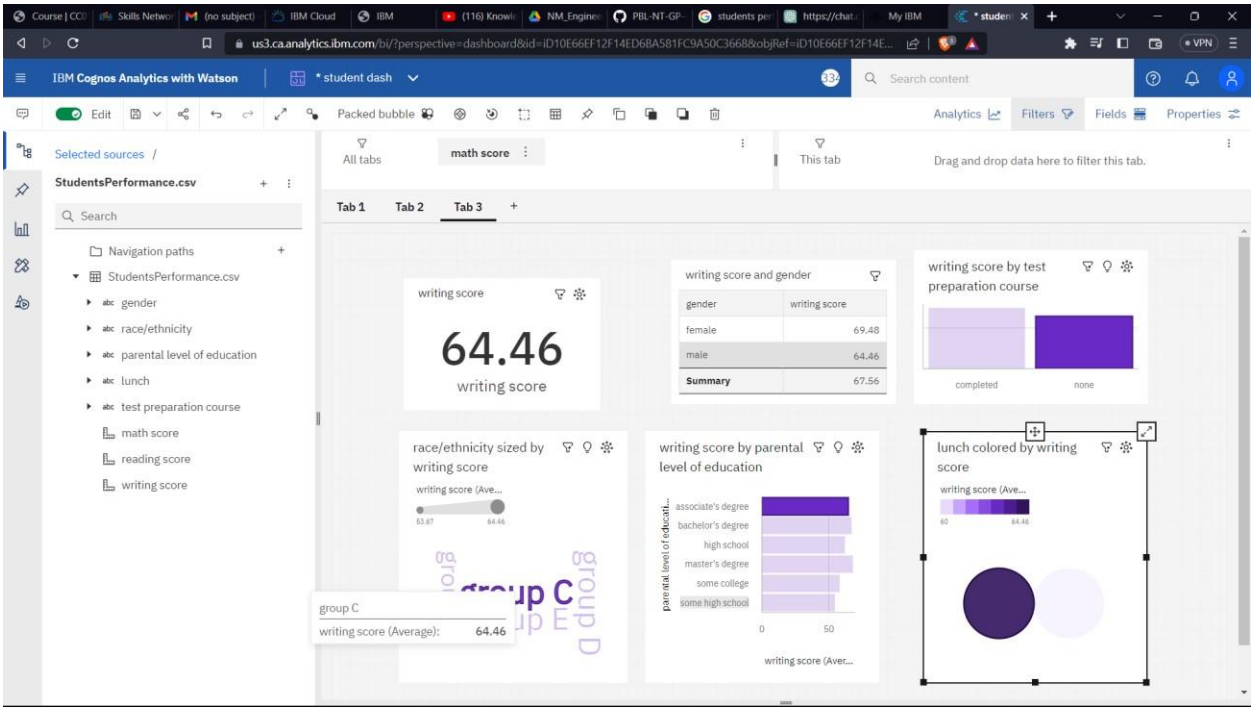


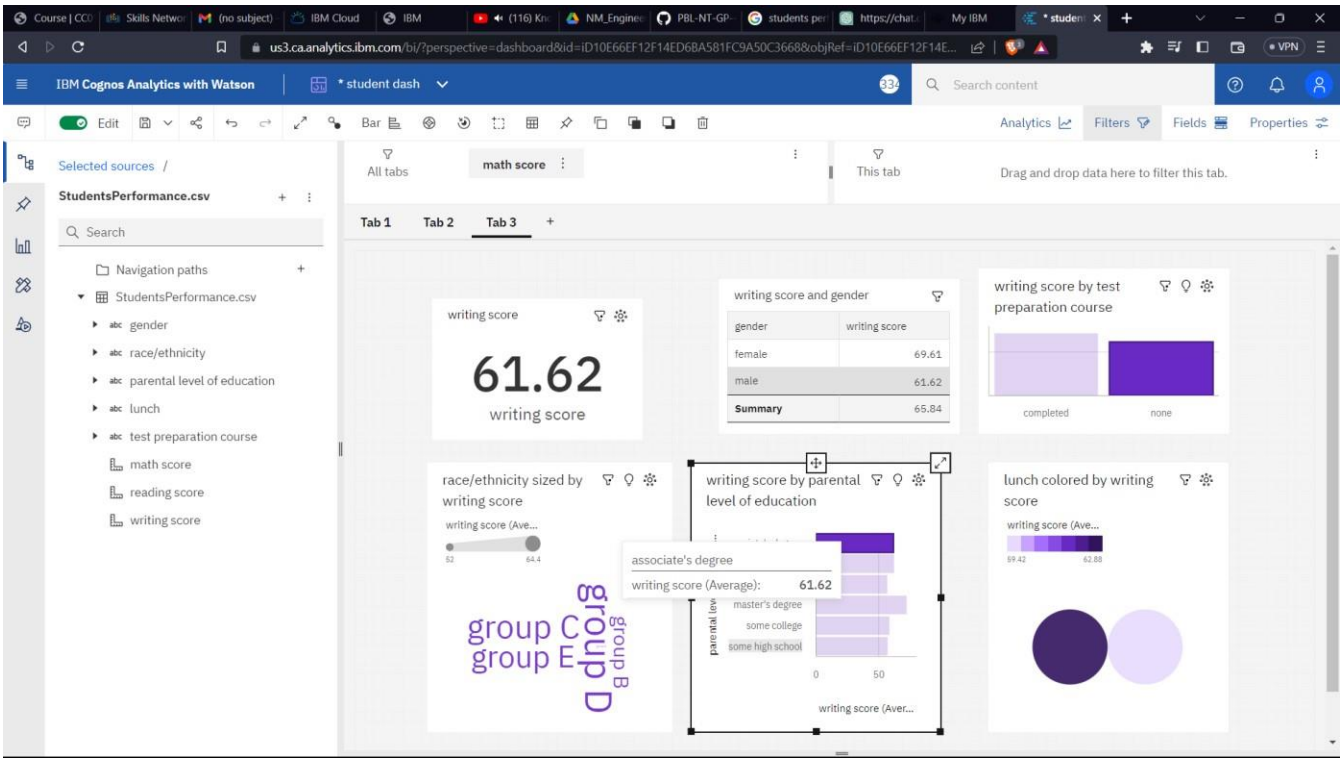
Data Responsiveness

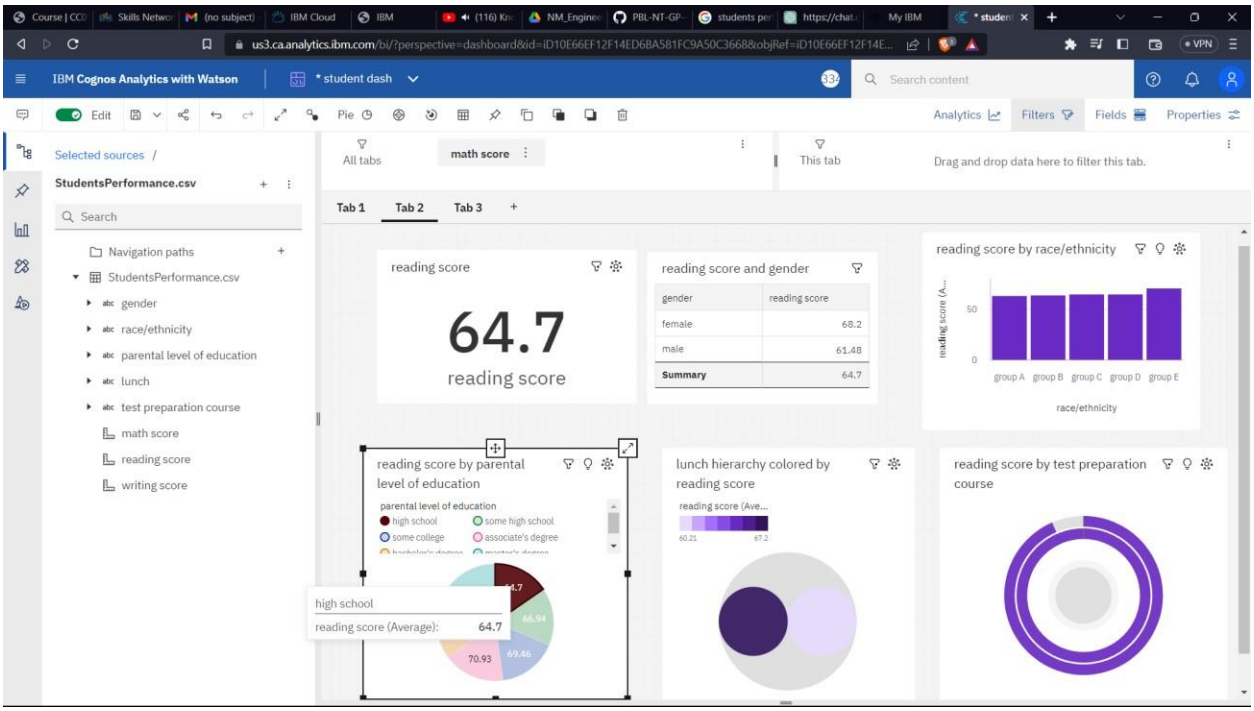
Data responsiveness for the dashboard was quick For every given visualization we can see the partivular or the individual chart or graph hilighted in the dashboard …..

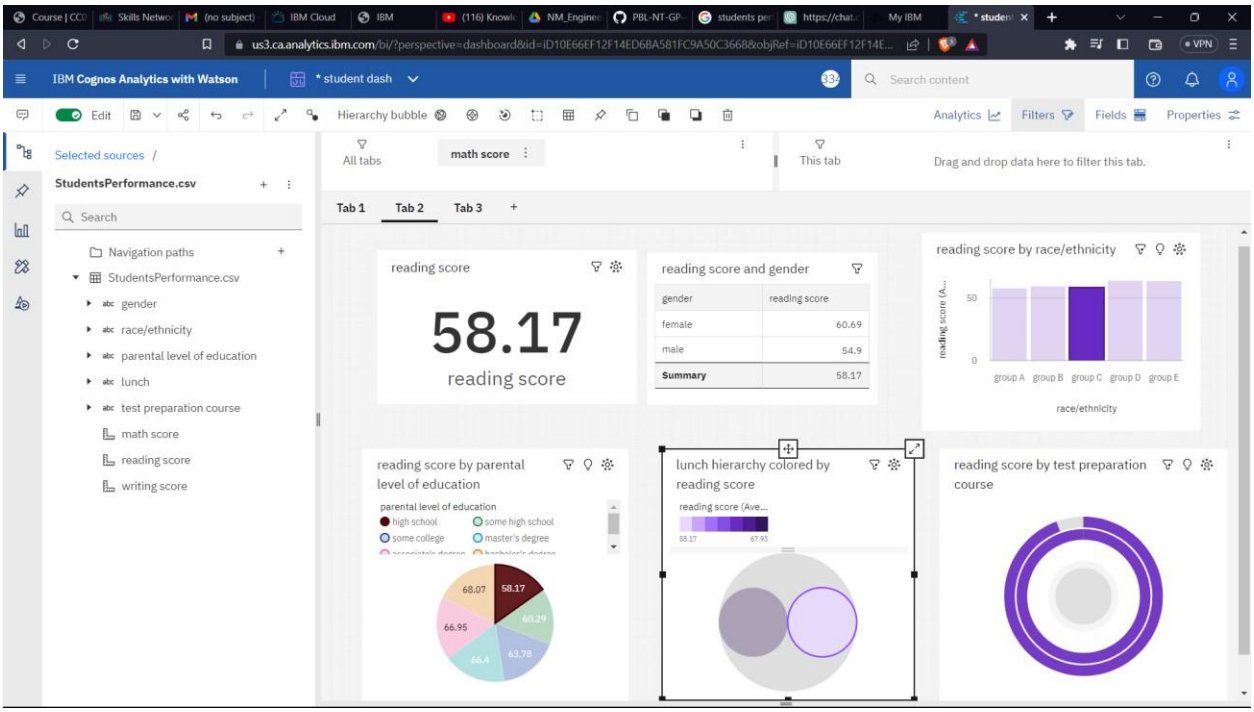
For all the three dashoard …..

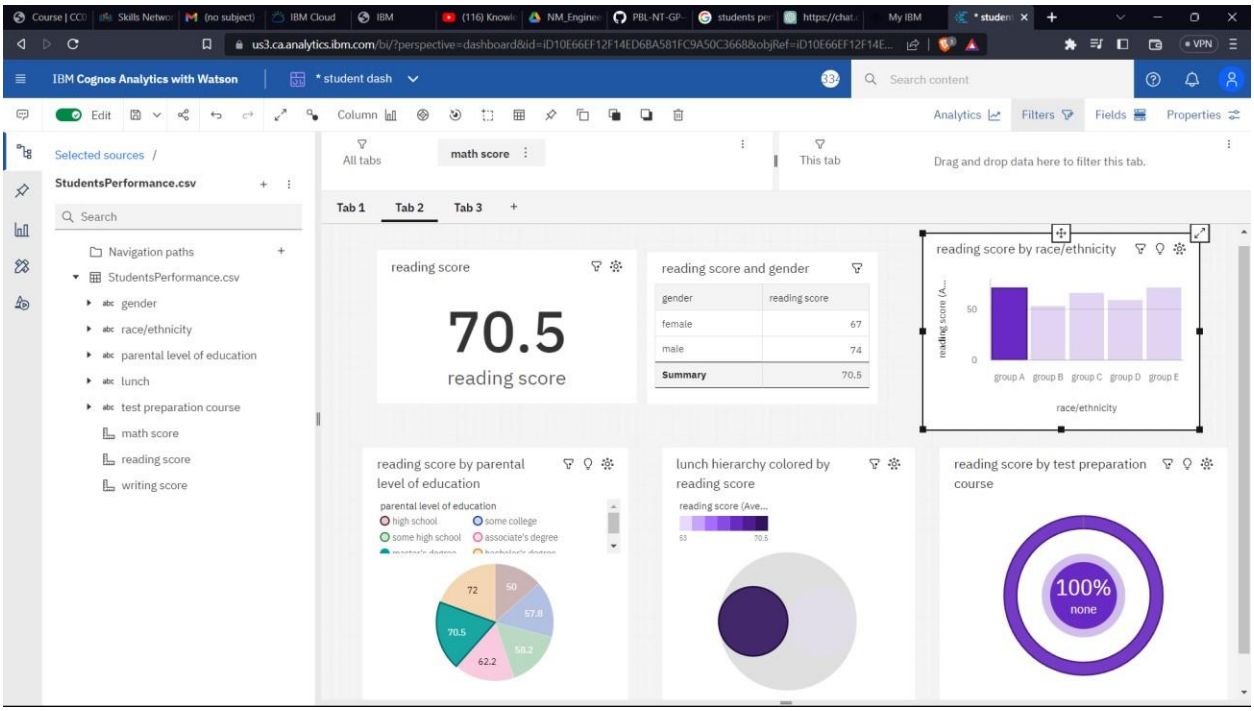
1. For reading score
2. For writing score
3. For Math score

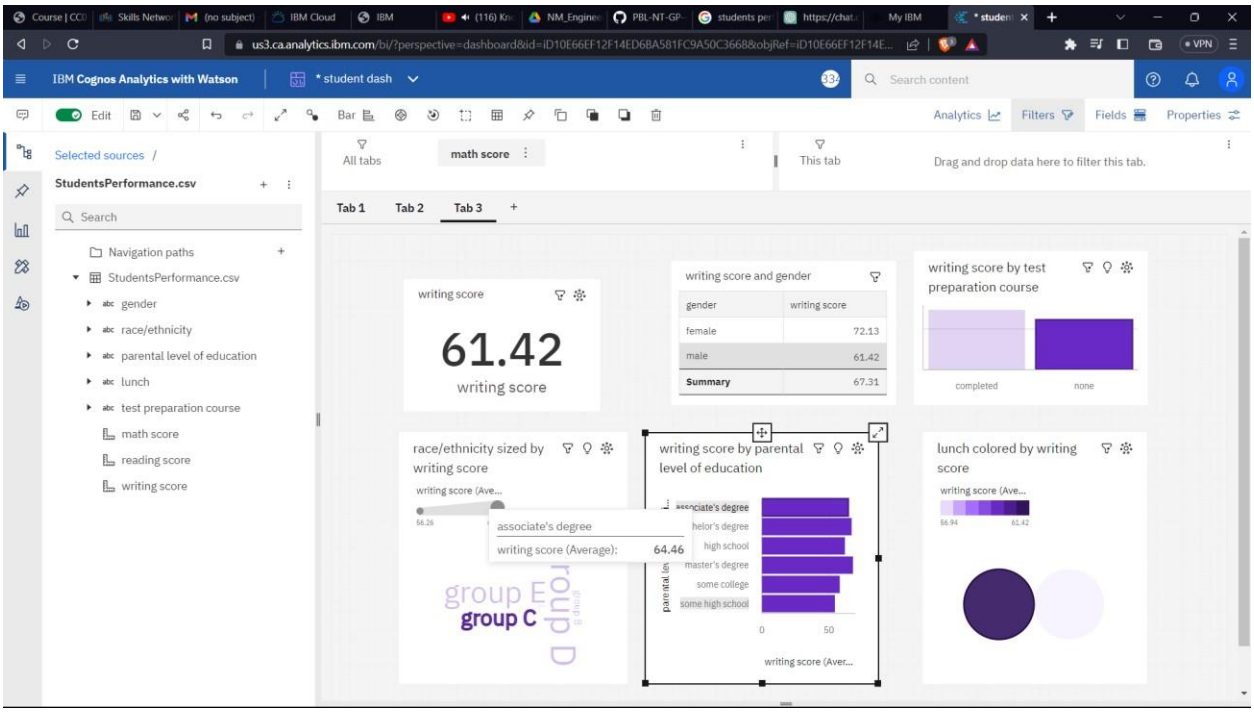

IBM Cognos Analytics with Watson
* student dash
Edit
Packed bubble
Analytics
Filters
Fields
Properties
Selected sources /
StudentsPerformance.csv
Search
Navigation paths
StudentsPerformance.csv
gender
race/ethnicity
parental level of education
lunch
test preparation course
math score
reading score
writing score
All tabs
math score
This tab
Drag and drop data here to filter this tab.
Tab 1
Tab 2
Tab 3
writing score
64.46
writing score
writing score and gender
gender
writing score
female
69.48
male
64.46
Summary
67.56
writing score by test preparation course
completed
none
race/ethnicity sized by writing score
writing score (Ave...
group C
writing score (Average):
64.46
writing score by parental level of education
associate's degree
bachelor's degree
high school
master's degree
some college
some high school
writing score (Aver...
lunch colored by writing score
writing score (Ave...

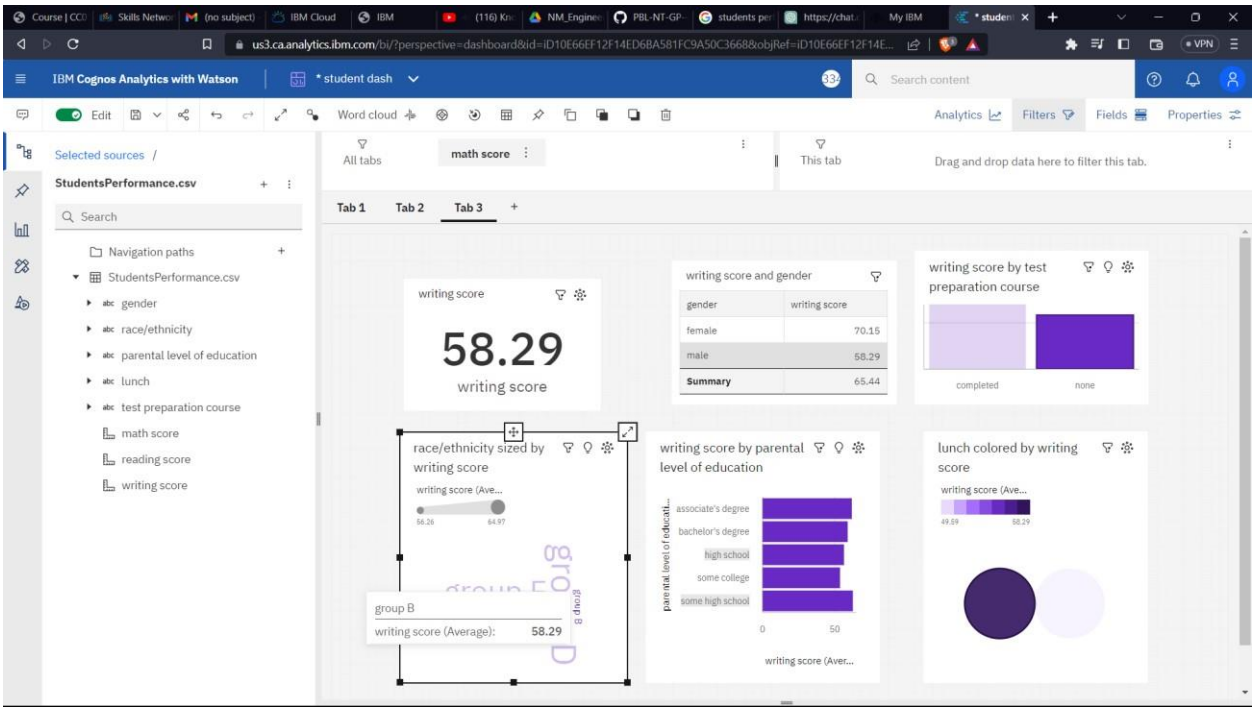

IBM Cognos Analytics with Watson
* student dash
Edit
Bar
Analytics
Filters
Fields
Properties
Selected sources /
StudentsPerformance.csv
Search
Navigation paths
StudentsPerformance.csv
gender
race/ethnicity
parental level of education
lunch
test preparation course
math score
reading score
writing score
All tabs
math score
This tab
Drag and drop data here to filter this tab.
Tab 1
Tab 2
Tab 3
writing score
61.62
writing score
writing score and gender
gender
writing score
female
69.61
male
61.62
Summary
65.84
writing score by test preparation course
completed
none
race/ethnicity sized by writing score
writing score (Ave...
group C
group E
group D
group B
writing score by parental level of education
associate's degree
writing score (Average):
61.62
master's degree
some college
some high school
writing score (Aver...
lunch colored by writing score
writing score (Ave...

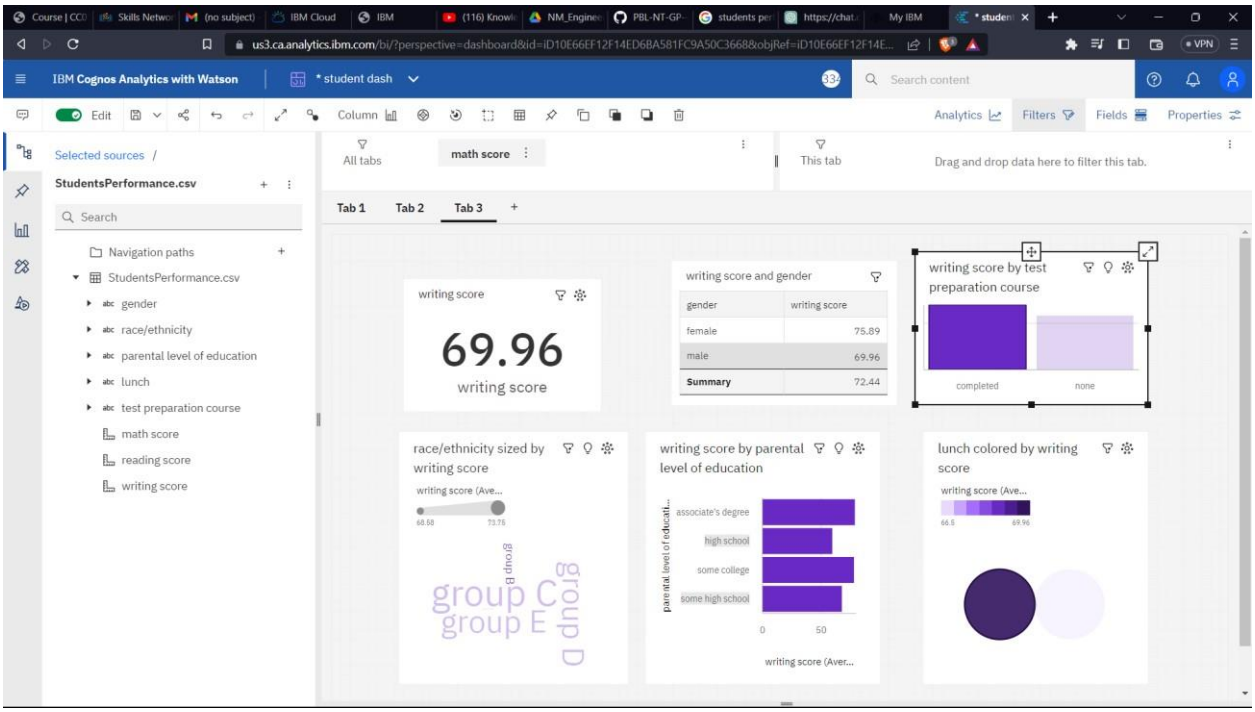

IBM Cognos Analytics with Watson
* student dash
Edit
Pie
Analytics
Filters
Fields
Properties
Selected sources /
StudentsPerformance.csv
Search
Navigation paths
StudentsPerformance.csv
gender
race/ethnicity
parental level of education
lunch
test preparation course
math score
reading score
writing score
All tabs
math score
This tab
Drag and drop data here to filter this tab.
Tab 1
Tab 2
Tab 3
reading score
64.7
reading score
reading score and gender
gender
reading score
female
68.2
male
61.48
Summary
64.7
reading score by race/ethnicity
group A
group B
group C
group D
group E
race/ethnicity
reading score by parental level of education
high school
some high school
some college
associate's degree
high school
reading score (Average):
64.7
lunch hierarchy colored by reading score
reading score (Ave...
reading score by test preparation course


IBM Cognos Analytics with Watson
* student dash
Edit
Hierarchy bubble
Analytics
Filters
Fields
Properties
Selected sources /
StudentsPerformance.csv
Search
Navigation paths
StudentsPerformance.csv
gender
race/ethnicity
parental level of education
lunch
test preparation course
math score
reading score
writing score
All tabs
math score
This tab
Drag and drop data here to filter this tab.
Tab 1
Tab 2
Tab 3
reading score
58.17
reading score
reading score and gender
gender
reading score
female
60.69
male
54.9
Summary
58.17
reading score by race/ethnicity
group A
group B
group C
group D
group E
race/ethnicity
reading score by parental level of education
high school
some high school
some college
master's degree
lunch hierarchy colored by reading score
reading score (Ave...
reading score by test preparation course


IBM Cognos Analytics with Watson
* student dash
Edit
Column
Analytics
Filters
Fields
Properties
Selected sources /
StudentsPerformance.csv
Search
Navigation paths
StudentsPerformance.csv
gender
race/ethnicity
parental level of education
lunch
test preparation course
math score
reading score
writing score
All tabs
math score
This tab
Drag and drop data here to filter this tab.
Tab 1
Tab 2
Tab 3
reading score
70.5
reading score
reading score and gender
gender
reading score
female
67
male
74
Summary
70.5
reading score by race/ethnicity
group A
group B
group C
group D
group E
race/ethnicity
reading score by parental level of education
parental level of education
high school
some college
some high school
associate's degree
72
50
57.8
70.5
58.2
62.2
lunch hierarchy colored by reading score
reading score (Ave...
63
70.5
reading score by test preparation course
100%
none


IBM Cognos Analytics with Watson
* student dash
Edit
Bar
Analytics
Filters
Fields
Properties
Selected sources /
StudentsPerformance.csv
Search
Navigation paths
StudentsPerformance.csv
gender
race/ethnicity
parental level of education
lunch
test preparation course
math score
reading score
writing score
All tabs
math score
This tab
Drag and drop data here to filter this tab.
Tab 1
Tab 2
Tab 3
writing score
61.42
writing score
writing score and gender
gender
writing score
female
72.13
male
61.42
Summary
67.31
writing score by test preparation course
completed
none
race/ethnicity sized by writing score
writing score (Ave...
56.26
associate's degree
writing score (Average):
64.46
group E
group C
writing score by parental level of education
associate's degree
high school
master's degree
some college
some high school
0
50
writing score (Aver...
lunch colored by writing score
writing score (Ave...
66.94
61.42

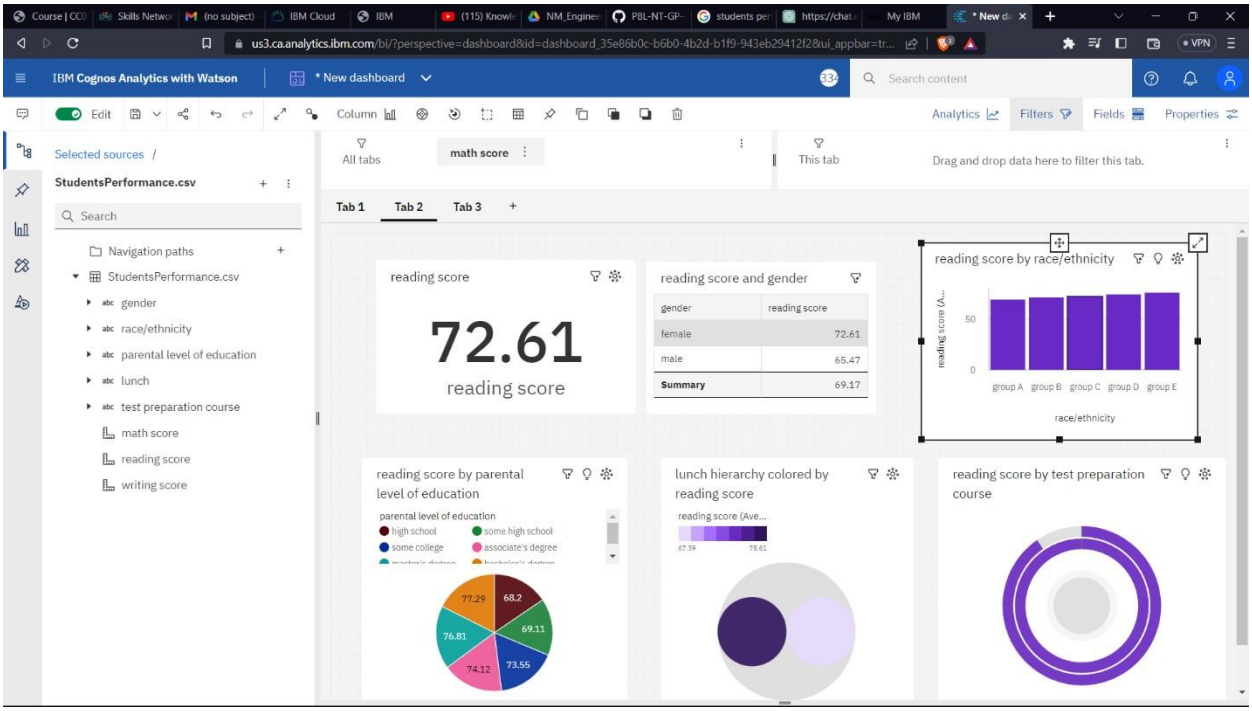

IBM Cognos Analytics with Watson
* student dash
Edit
Word cloud
Analytics
Filters
Fields
Properties
Selected sources /
StudentsPerformance.csv
Search
Navigation paths
StudentsPerformance.csv
gender
race/ethnicity
parental level of education
lunch
test preparation course
math score
reading score
writing score
All tabs
math score
This tab
Drag and drop data here to filter this tab.
Tab 1
Tab 2
Tab 3
writing score
58.29
writing score
writing score and gender
gender
writing score
female
70.15
male
58.29
Summary
65.44
writing score by test preparation course
completed
none
race/ethnicity sized by writing score
writing score (Ave...
56.26
64.97
group B
writing score (Average):
58.29
writing score by parental level of education
associate's degree
bachelor's degree
high school
some college
some high school
0
50
writing score (Aver...
lunch colored by writing score
writing score (Ave...
49.59
58.29

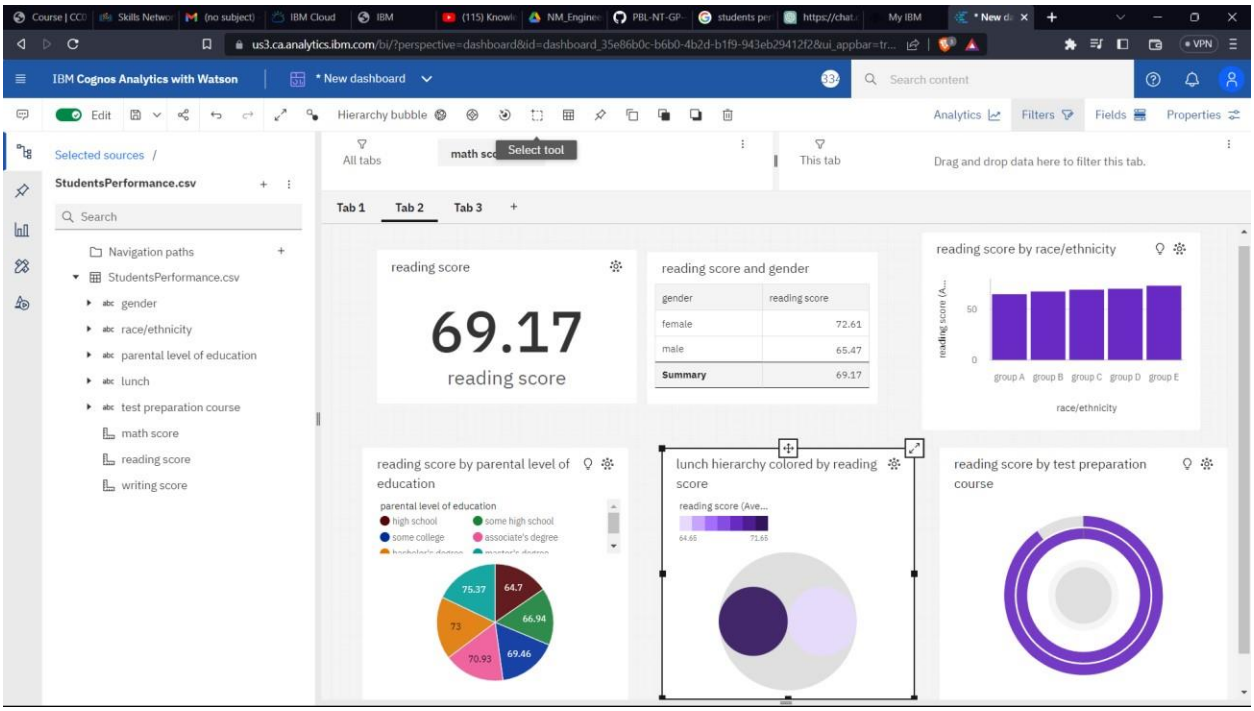

IBM Cognos Analytics with Watson
* student dash
Edit
Column
Analytics
Filters
Fields
Properties
Selected sources /
StudentsPerformance.csv
Search
Navigation paths
StudentsPerformance.csv
gender
race/ethnicity
parental level of education
lunch
test preparation course
math score
reading score
writing score
All tabs
math score
This tab
Drag and drop data here to filter this tab.
Tab 1
Tab 2
Tab 3
writing score
69.96
writing score
writing score and gender
gender
writing score
female
75.89
male
69.96
Summary
72.44
writing score by test preparation course
completed
none
race/ethnicity sized by writing score
writing score (Ave...
68.68
73.76
group B
group C
group E
writing score by parental level of education
associate's degree
high school
some college
some high school
0
50
writing score (Aver...
lunch colored by writing score
writing score (Ave...
66.5
69.96

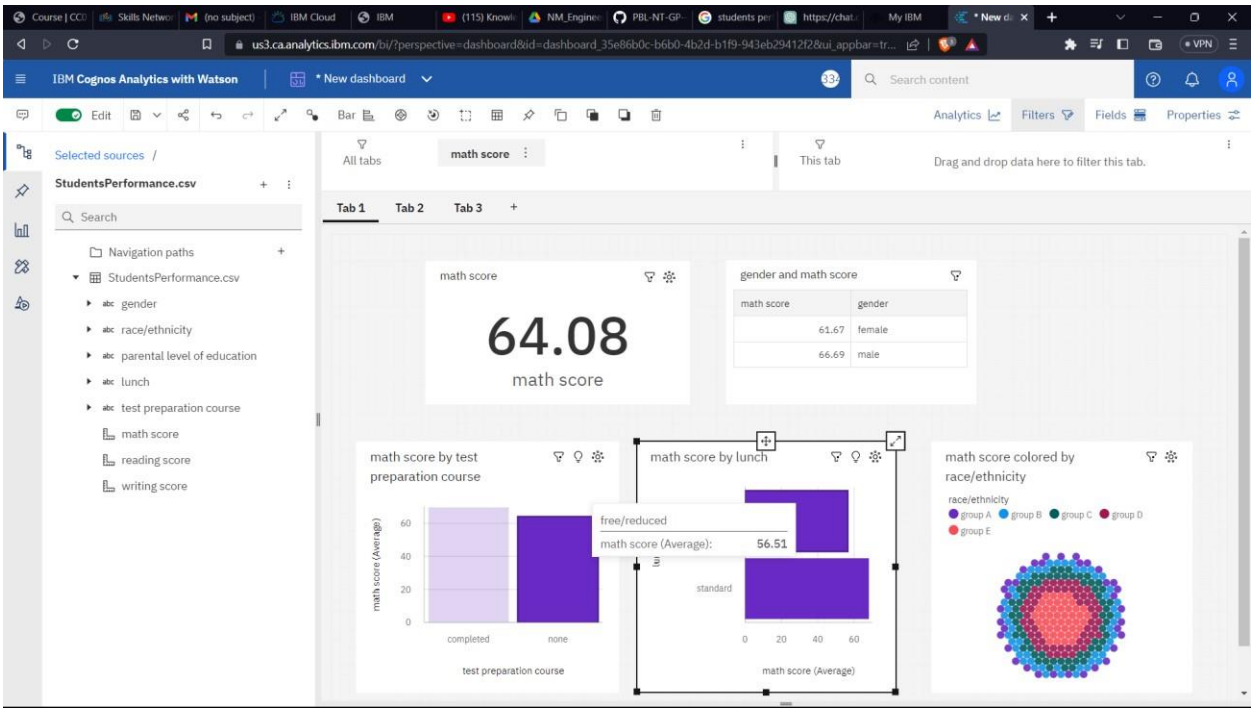
Utilization of data filters

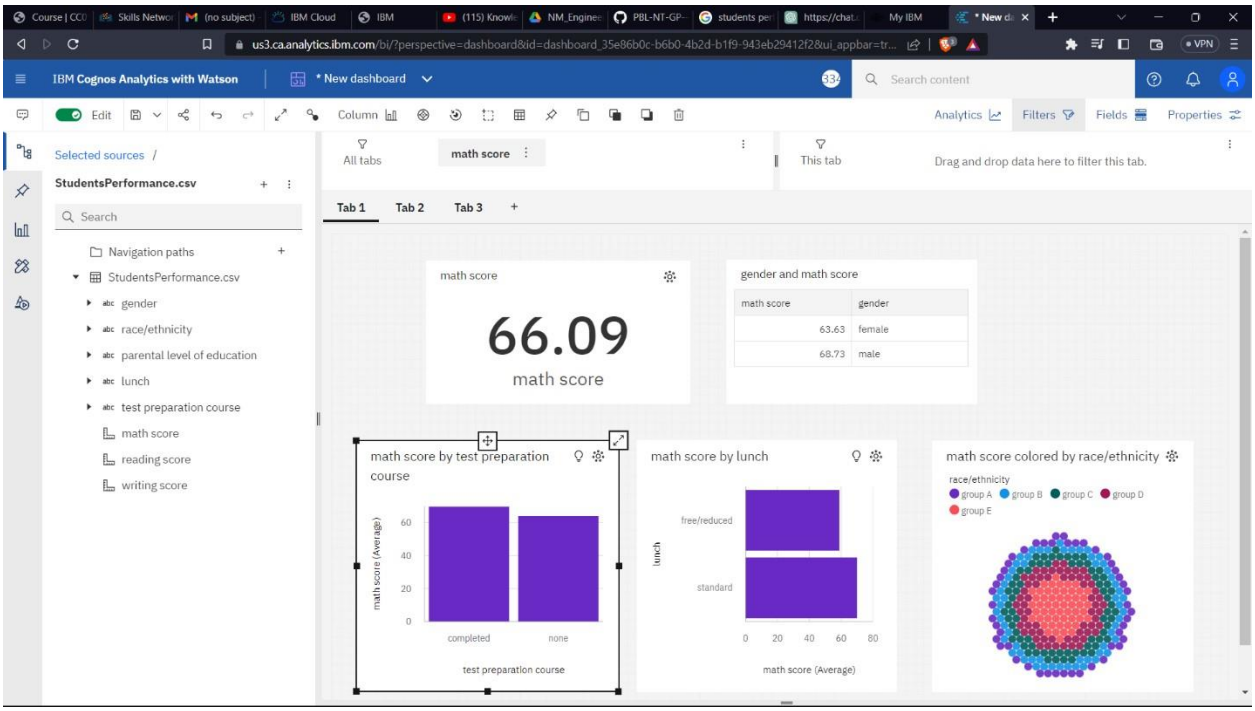
Data filters are used soo the dashboards can be clearly visualized .and filters applied in the dashboard show the uniqueness of the data in the students performance analysis……..

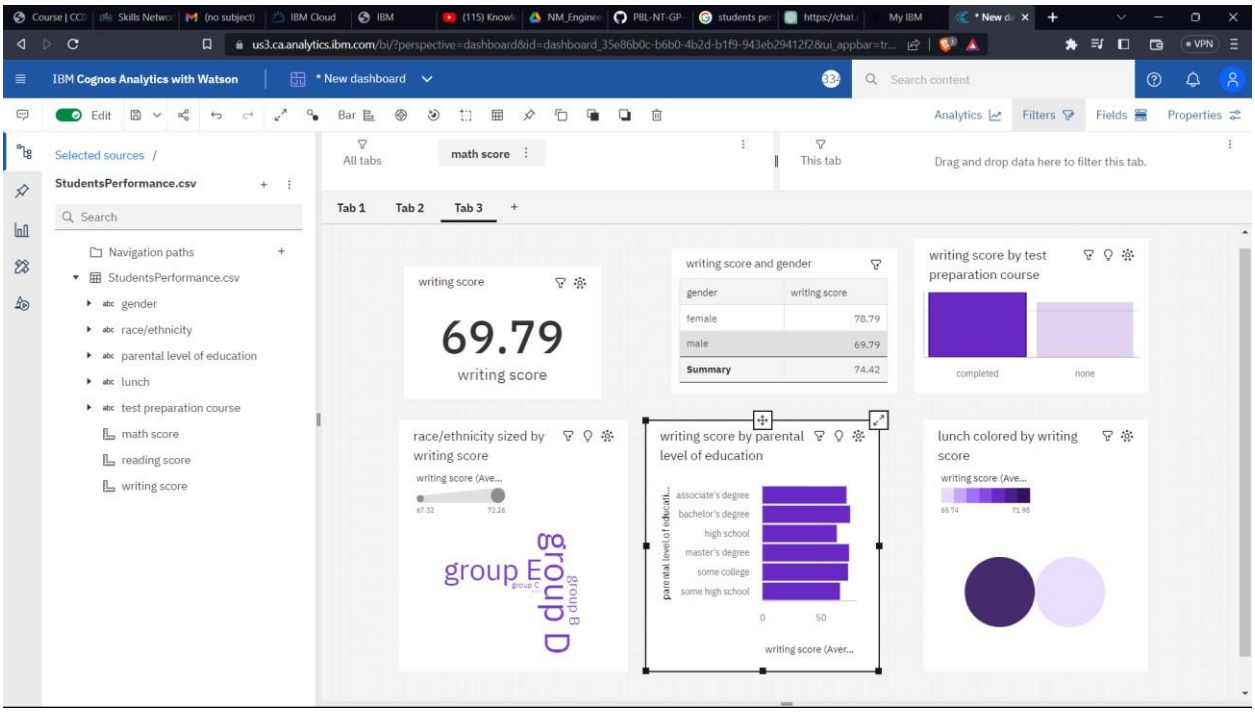
Filtered dashboard are hilighted below ……




IBM Cognos Analytics with Watson
* New dashboard
Edit
Hierarchy bubble
Select tool
Analytics
Filters
Fields
Properties
Selected sources /
StudentsPerformance.csv
Search
Navigation paths
StudentsPerformance.csv
gender
race/ethnicity
parental level of education
lunch
test preparation course
math score
reading score
writing score
All tabs
This tab
Drag and drop data here to filter this tab.
Tab 1
Tab 2
Tab 3
reading score
69.17
reading score
reading score and gender
gender
reading score
female
72.61
male
65.47
Summary
69.17
reading score by race/ethnicity
group A
group B
group C
group D
group E
race/ethnicity
reading score by parental level of education
parental level of education
high school
some high school
some college
associate's degree
64.7
66.94
69.46
70.93
73
75.37
lunch hierarchy colored by reading score
reading score (Ave...
64.66
71.66
reading score by test preparation course

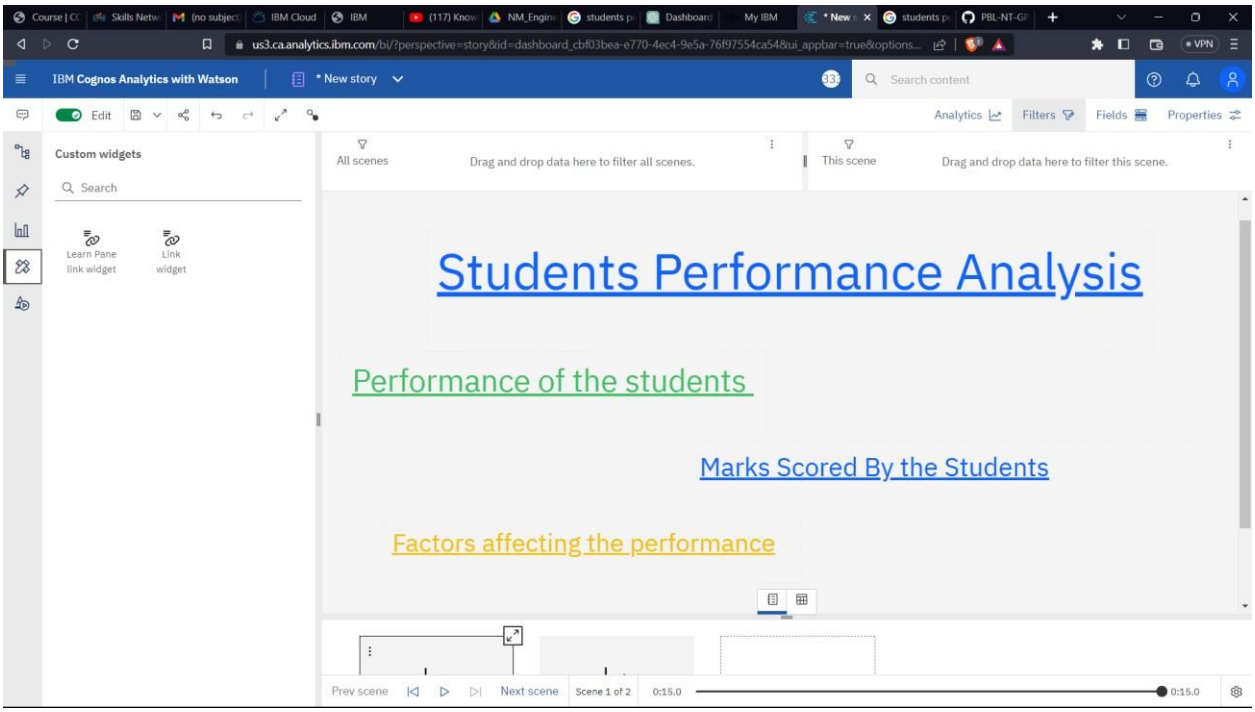

IBM Cognos Analytics with Watson
* New dashboard
Edit
Bar
Analytics
Filters
Fields
Properties
Selected sources /
StudentsPerformance.csv
Search
Navigation paths
StudentsPerformance.csv
gender
race/ethnicity
parental level of education
lunch
test preparation course
math score
reading score
writing score
All tabs
math score
This tab
Drag and drop data here to filter this tab.
Tab 1
Tab 2
Tab 3
math score
64.08
math score
gender and math score
math score
gender
61.67
female
66.69
male
math score by test preparation course
completed
none
test preparation course
math score by lunch
free/reduced
math score (Average):
56.51
standard
math score (Average)
math score colored by race/ethnicity
race/ethnicity
group A
group B
group C
group D
group E

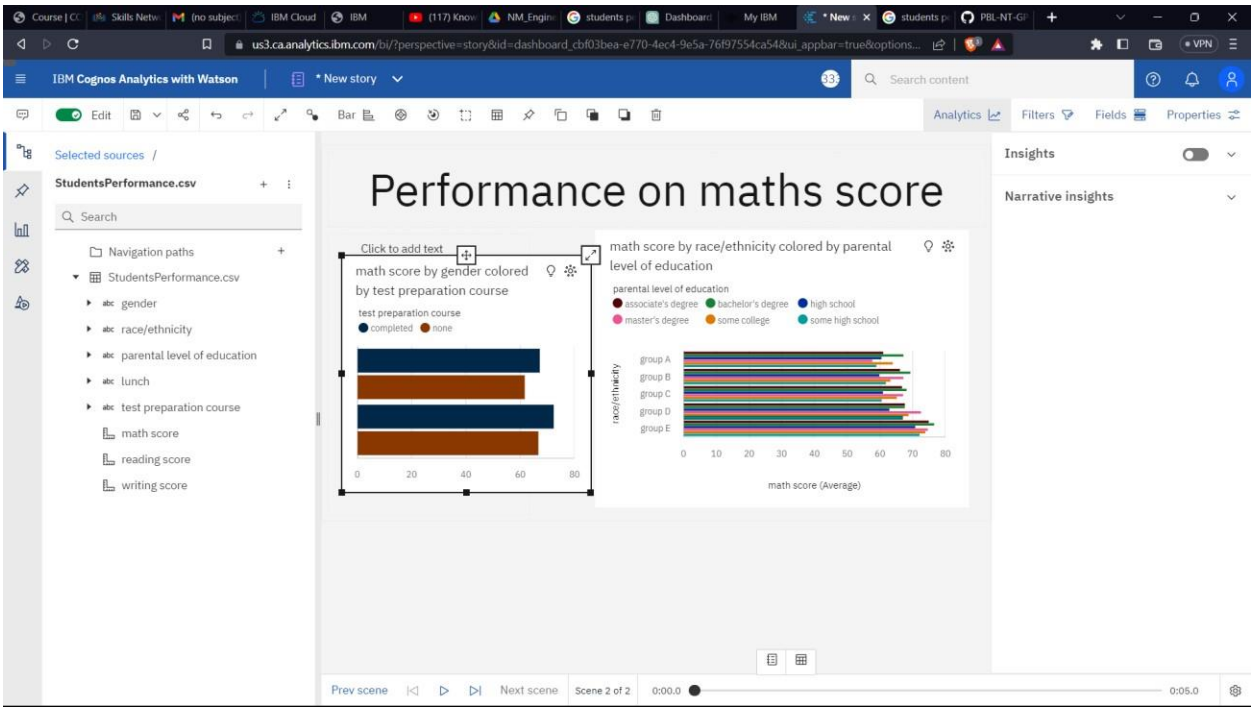


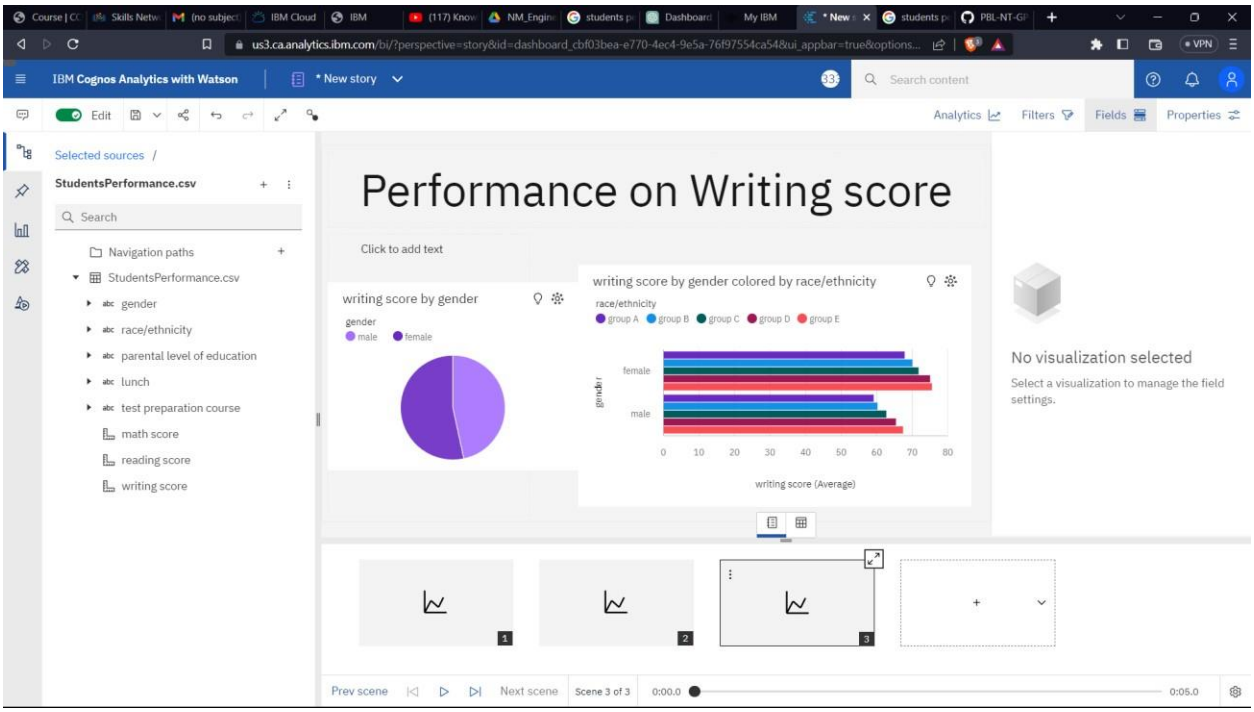


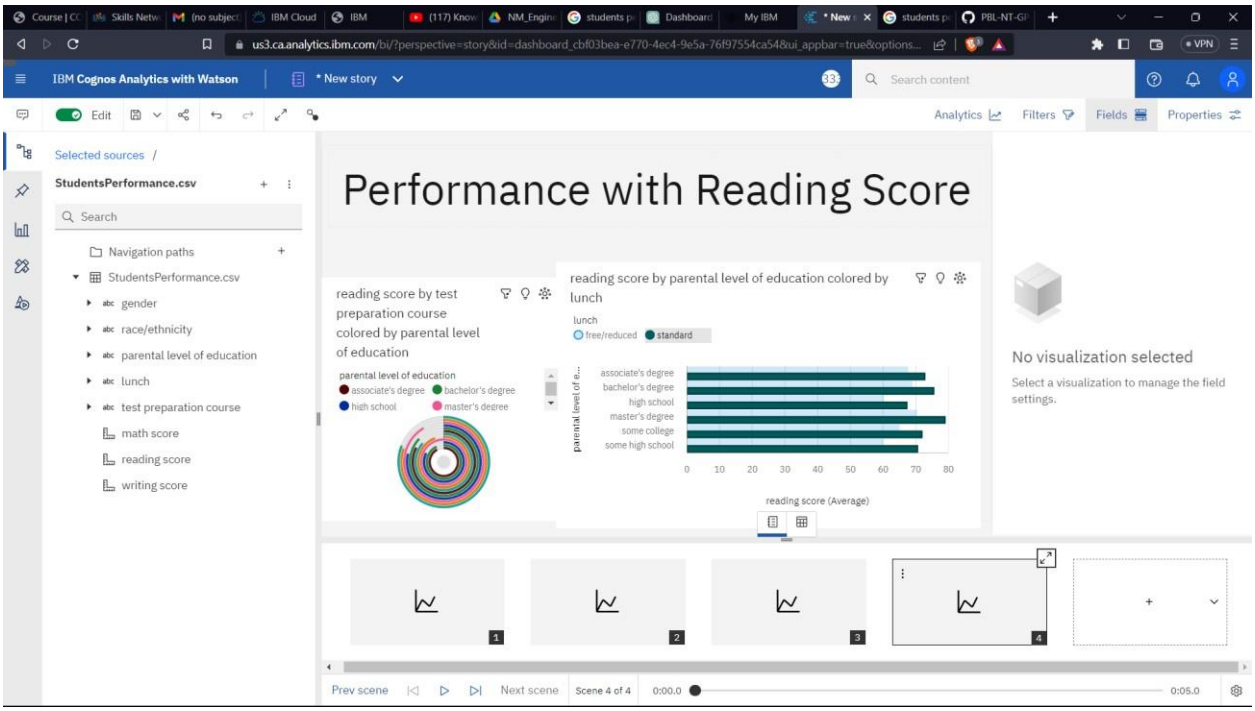
Effective User Story

it follows a specific format and is used in Agile software development methodologies, such as Scrum, to capture requirements from the perspective of the end user or customer. User stories are typically written on index cards or in digital format and serve as a communication tool between the development team and stakeholders.




IBM Cognos Analytics with Watson
* New story
Search content
Edit
Bar
Analytics
Filters
Fields
Properties
Selected sources /
StudentsPerformance.csv
Search
Navigation paths
StudentsPerformance.csv
gender
race/ethnicity
parental level of education
lunch
test preparation course
math score
reading score
writing score
Performance on maths score
Click to add text
math score by gender colored by test preparation course
test preparation course
completed
none
math score by race/ethnicity colored by parental level of education
parental level of education
associate's degree
bachelor's degree
high school
master's degree
some college
some high school
group A
group B
group C
group D
group E
race/ethnicity
math score (Average)
Insights
Narrative insights
Prev scene
Next scene
Scene 2 of 2
0:00.0
0:05.0

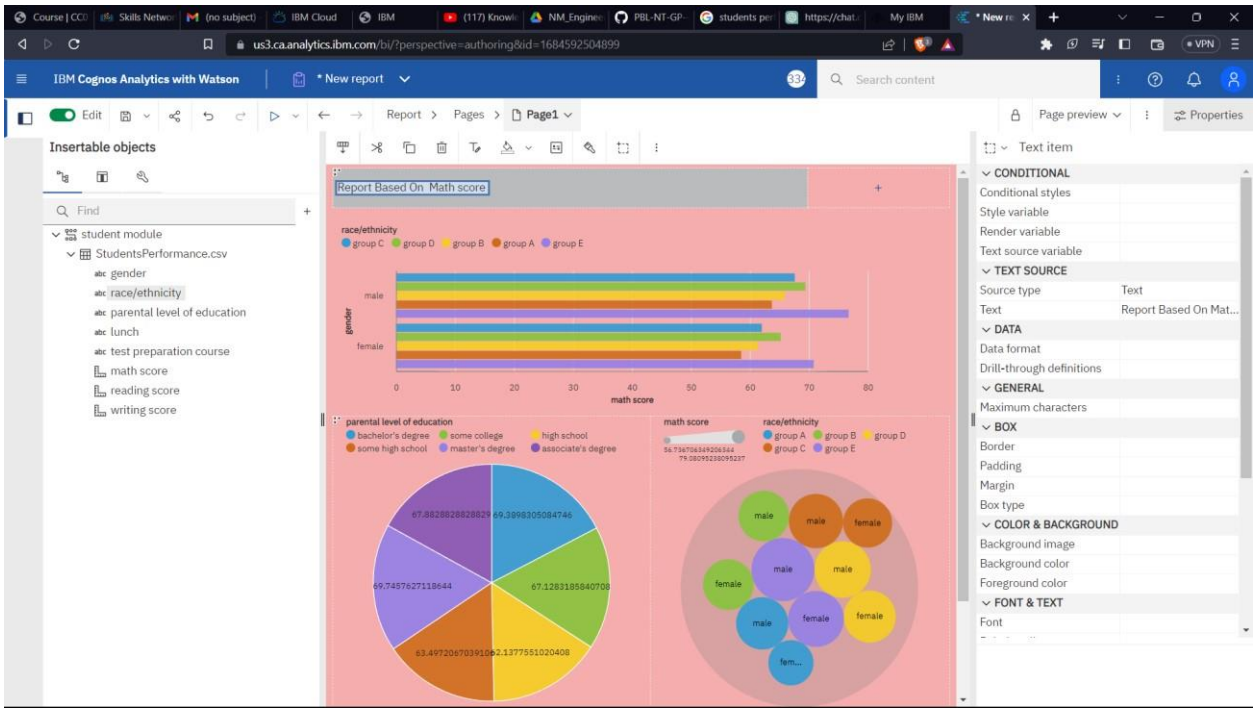

IBM Cognos Analytics with Watson
* New story
Search content
Edit
Analytics
Filters
Fields
Properties
Selected sources /
StudentsPerformance.csv
Search
Navigation paths
StudentsPerformance.csv
gender
race/ethnicity
parental level of education
lunch
test preparation course
math score
reading score
writing score
Performance on Writing score
Click to add text
writing score by gender
gender
male
female
writing score by gender colored by race/ethnicity
race/ethnicity
group A
group B
group C
group D
group E
gender
female
male
writing score (Average)
No visualization selected
Select a visualization to manage the field settings.
Prev scene
Next scene
Scene 3 of 3
0:00.0
0:05.0

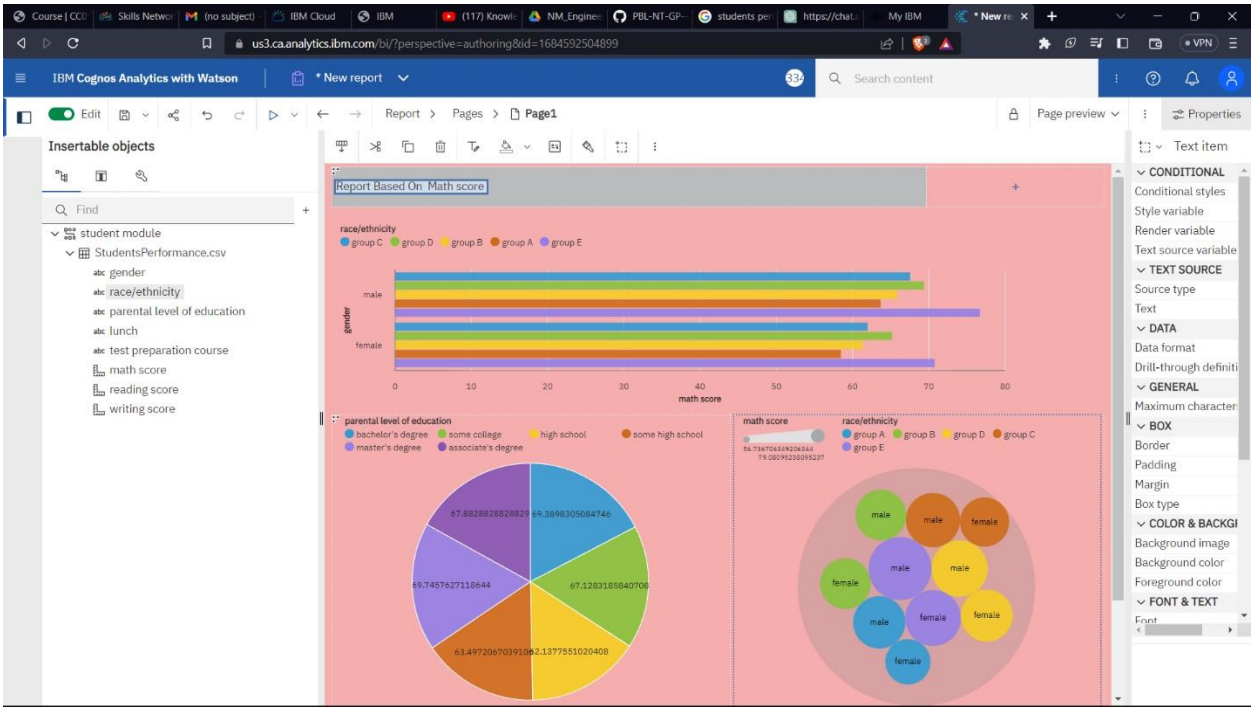


Descriptive Reports

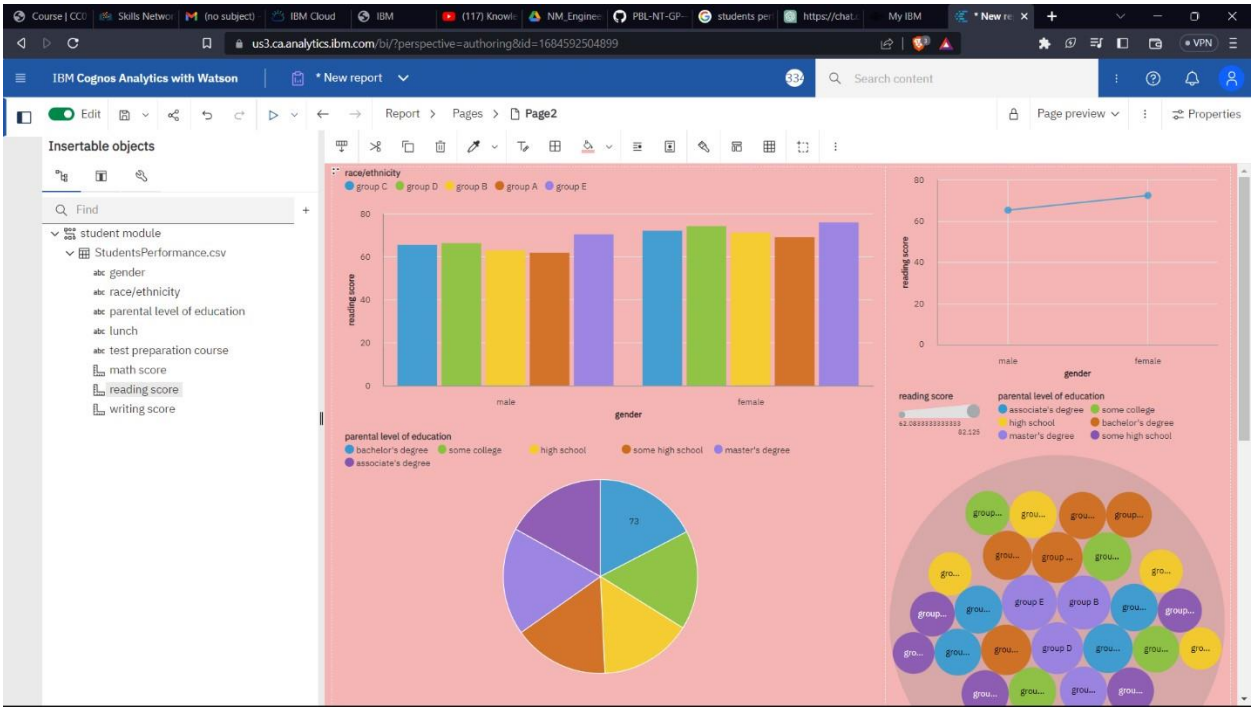
This reports are created based on the dashboard and user story . the reports show a clear view of the work that we have done so far. The report created in cognos analytics with watson shows a final output of the students performance analysis……

Here we have 4 visualizations for the report

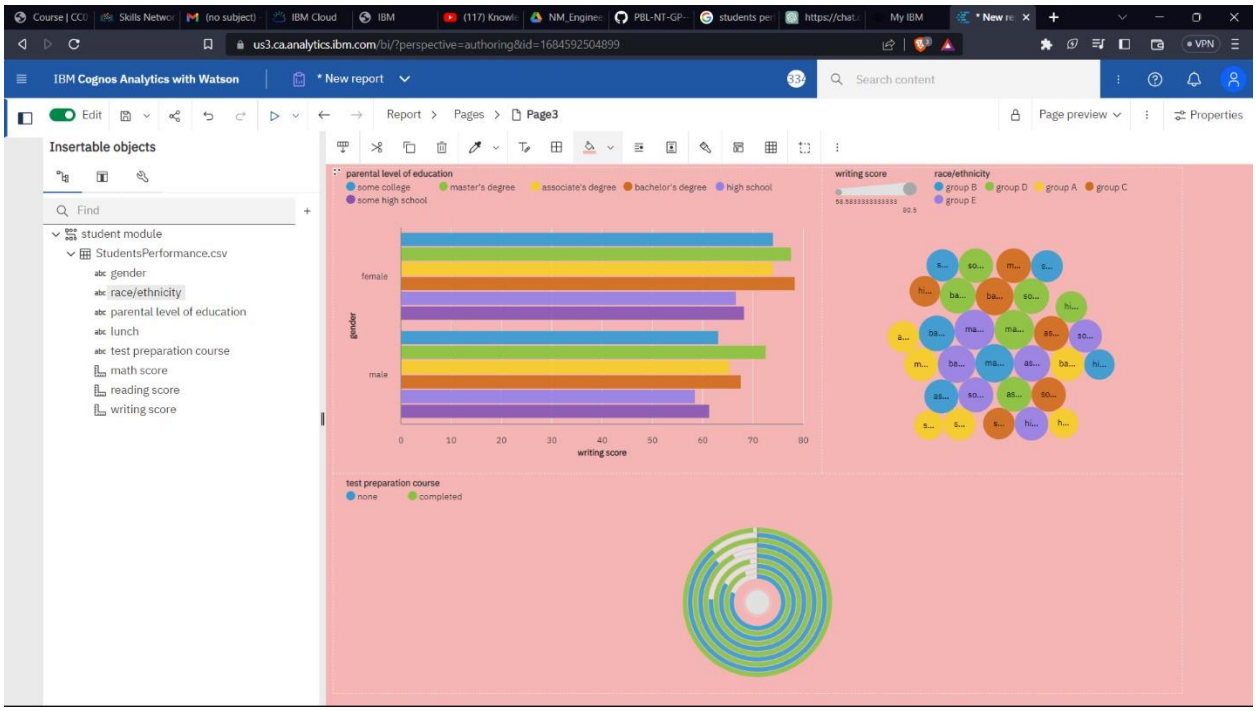




us3.ca.analytics.ibm.com/bi/?perspective=authoring&id=1684592504899
IBM Cognos Analytics with Watson
* New report
Search content
Edit
Report > Pages > Page1
Page preview
Properties
Insertable objects
Find
student module
StudentsPerformance.csv
gender
race/ethnicity
parental level of education
lunch
test preparation course
math score
reading score
writing score
Report Based On Math score
race/ethnicity
group C
group D
group B
group A
group E
male
female
gender
math score
parental level of education
bachelor's degree
some college
high school
some high school
master's degree
associate's degree
67.8828828828829
69.3898305084746
69.7457627118644
67.1283185840708
63.4972067039106
62.1377551020408
Text item
CONDITIONAL
Conditional styles
Style variable
Render variable
Text source variable
TEXT SOURCE
Source type
Text
DATA
Data format
Drill-through definiti
GENERAL
Maximum character
BOX
Border
Padding
Margin
Box type
COLOR & BACKGI
Background image
Background color
Foreground color
FONT & TEXT



us3.ca.analytics.ibm.com/bi/?perspective=authoring&id=1684592504899
IBM Cognos Analytics with Watson
* New report
Search content
Edit
Report > Pages > Page2
Page preview
Properties
Insertable objects
Find
student module
StudentsPerformance.csv
gender
race/ethnicity
parental level of education
lunch
test preparation course
math score
reading score
writing score
race/ethnicity
group C
group D
group B
group A
group E
reading score
male
female
gender
parental level of education
bachelor's degree
some college
high school
some high school
master's degree
associate's degree
73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Search content
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Properties
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Find
student module
StudentsPerformance.csv
gender
race/ethnicity
parental level of education
lunch
test preparation course
math score
reading score
writing score
parental level of education
some college
master's degree
associate's degree
bachelor's degree
high school
some high school
female
male
gender
writing score
writing score
race/ethnicity
group B
group D
group A
group C
group E
test preparation course
none
completed

THANK YOU…….